PRECIOUS PACIFIC PLATINUM

How Electric Smelters May Develop Western Industries.

NUGGET AS BIG AS SUPERIOR

What Uncle Sam's Expert, Dr. David T. Day, Has to Say About Waste

Product Values.

(Copyright, 1906, by Frank G. Carpenter.) been made which will revolutionize placer mining all over the world, and add millions to the wealth of the United States. They wild as any part of the Rockies. Based upon them, syndicates are already forming and a great number of people. I refer to the black sand. experiments which, at the direction of Congress, the geological survey has made and is making as to the minerals found in black

Fortunes in Black Sand. Every miner knows what black sand is. It is the heavier particles which come from the wearing away of rocks containing certain minerals. All sand comes from rock and the greater part of it from quartz. The

quartz sands are white or light brown in

color. They are found on our Atlantic

shores, and are scattered here and there

all over the country. There are many of them in the west, but there, mixed with

them and often in great beds apart from them, are found deposits of black sand. There is so much of this black stuff along the Pacific coast that the seashore is dark

and not white when viewed from the ocean.
This is the case from Cape Flattery on
Puget sound down to San Diego. As one
comes closer shore he often sees great

masses of black rocks and headlands, the latter made up of layers of black and

white sand, one running through the other somewhat like marble cake. These head

what like that of San Francisco,

ands sometimes result from the dropping

This black sand is also found along the big western rivers. The Columbia has many

such deposits, and the Snake river is es-

pecially rich. Black sand is to be found in every mineral region, and it is more or less connected with every placer mine. When Director Walcott began to investigate

the subject he sent out letters to eight

the United States and asked each to send

which he was working. More than a thou

ples came from thirty-five different states

and territories, including the Appalachians and the Rockies and all parts of the Pacific coast even to Alaska. The samples were

analyzed and assayed for the gold and plat-

inum they contained, and also for the nu-merous other minerals in them which our scientists thought might be of industrial

value. As a result of the assays and the experiments made in the reduction of these

sands, at the Portland exposition, it is

known that they can be made of enormous

value to the country, and that they may bring in millions of dollars of a product

David Day 78. King Saul.

"I am like Saul the son of Kish. I start-

ed out to hunt my father's asses and lo!

Dr. David T. Day, the chief of the mining

and mineral resources division of our geo-

lo-teal survey, might well have made the

I found a kingdom."

sand placer miners scattered all ove

A SOURCE OF WEALTH

long chat with him about his experiments. He has been chief investigator of the black sand minerals and the principal discoveries are due to him.

Dr. Day is one of our best known geologists. He has been connected with the survey for almost a quarter of a century, and has been in charge of the government mining exhibits at our national expositions from the world's fair at Chicago to Portland. It was at Portland fast year that the most important of the black sand experiments were made.

ments were made.

In my talk with Dr. Day I asked him how the investigation originated. He told me it was through a search for platinum, a metal which I have referred to above as Saul's father's asses, and in the bunt for which he discovered vast quantities of mag-netic iron, chrome iron, zircon and rare minerals valuable in the arts. Chrome iron is used in the manufacture of paints, chrome steel and bichromate of potash. Zircon is valuable in making incandescent gas and electric lights, and monazite and other metals for the same purpose. In addition to them Dr. Day found titanium and other things of which I write further on.

The Hunt for Platinum.

The beginning of the hunt was for platinum and it was the direct outcome of the Japanese-Russian war. The chief platinum mines now known to the world are in the Ural mountains on the borders of Siberia. It is from there that the most of the world's supply comes, and the supply is controlled by a trust which furnishes our American markets with platinum at its own prices. Within the past year experiments have When the war broke out our manufacturers were greatly alarmed, and they sent in petitions to Congress to have the geological survey look up platinum in the United States. It was known that the metal exmay build up a manufacturing industry on our Pacific slope, and populate regions in the northwest which are now as metal and thus beat the trust. The geological survey asked for an appropriation, and them, syndicates are already forming and got it, but they worded their request so they will give small or large fortunes to that the work covered all the metals in the

Worth More Than Gold.

DR. DAVID DAY

which have been filled with platinum and tightly corked. They were buried in the sands, and there are various traditions as to where they are hidden. A bottle the size of the ordinary cigar filled with platinum is worth at least \$100, and those six bottles contain about \$10,000 worth of this most precious of the white metals. Just where they lie no one has yet been able to ascertain, and the hunt goes on.

The average placer miner of the west has long known of the existence of platinum in black sand, but he has never made much effort to save it. This has been owing to the ignorance regarding the metal much effort to save it. This has been owing to the ignorance regarding the metal and its value, and also to some unsuccessful attempts to dispose of it. Not long ago a miner from Oregon sent to the east three skins of the sea otter and twenty-five pounds of platinum. He got something like \$1,000 a skin for the otters, but only realized \$1 a pound for his platinum. How he was defrauded I do not know: but at the present prices his not know; but at the present prices his platinum should have brought him about

Platinum and Gold. By the use of the separating tables employed by Dr. Day for getting the metals from the black sand, the grains of platinum and gold are taken out at a cost of a few cents per ton. 'The platinum which has formerly gone to waste can now be saved, and it will form an important by-product of most placer mines. When found in connection with gold it remains in the sluices with other heavy materials. In panning, it will even stay behind the gold in the pan. color, and its resistance to nitric acid. In general platinum grains are smaller than

an enormous mcrease of gold from certain as seven or eight dollars per horsepower of our placer mines. So far the most of the gold saved has been by means of mercury in sluice boxes. The dirt containing the gold has been washed into these boxes and saved with quicksilver. A great deal of the gold, however, our geologists now and that electricity is to make the first the gold by the west in the future. the gold, however, our geologists now find, has never been touched by the quicksliver. The results of the investigations have It has been coated with copper or other

AND EXPERT

tinued Dr. Day. "There are also metals of industrial worth containing enormous possibilities. A great part of the sand is made up of magnetic iron, which by a little electric furnace made inst year we are able to turn into excellent steel. All along the Pacific coast from Puget sound to the southern end of California this black sand exists in great quantities. It lies in deposits back from the coast, on ledges and headlands, and is washed up by the sea at every high tide, being rolled over and over and thrown out upon the beach. In that sand, if it were separated from the other minerals, there is enough iron to fill Lake Superior and make it solid iron ore. This is on the estimate of working sands that contain only 10 per cent of magnetic iron, contain only 10 per cent of magnetic iron, and some contain far more. Suppose we had five hundred furnaces situated along that coast, and that each should handle but one hundred tons of ore a day. Altogether they would handle fifty thousand tons per day, and at three hundred days to the year have an annual output of fifteen million tons, or about one-third as much as the iron product of the whole United States. That would make the Pacific slope one of the great industrial centers of our country, and also the workshop for China, Japan and the remainder of the orient. In-deed the steel tracks for China's new rallroads may yet come from the black sands of the Pacific."

Smelting by Electricity.

Dr. Day tells me that these iron sands can be turned into steel by means of electricity at a lower cost than ordinary iron can be smelted with coal. Only a very It is known by its great weight its white small amount of coke is needed and the electricity does the work at 50 cents less per ton. This is very important to the Pacific coast, as it is now producing some The new experiments with the tables to be used for saving the ore will result in lower rates than at Niagara, and at as low fron used by the west in the future

Uncle Sam's Little Furnace at Portland.

During the Portland exposition Uncle Sam at the instance of Dr. Day put up a little furnace there to experiment on these sands. The Canadian government had sent a commission to Europe to report on what is going on there in the reduction of iron by electricity, and it was on the basis of that report that the furnace was made. The an who did the work was an expert named Wilson of the Wilson Aluminum Company,

which has taken out patents for certain electric furnaces. Mr. Wilson arrived in

Portland last October, and at the end of one week he had made a furnace and was pro-

ducing steel from these sands. His furnace turned out good steel in fifty-pound lots the

day it began to work, and it had a capacity of a half ton of steel a day. It was, of

course, small and experimental, but it work-

ed right along without a hitch. It was run for a month for one thausand dollars, and

this included the original cost of construc-

tion and all labor and cost of operation dur-ing that time. To show how quickly it could

be worked, Dr. Day and a party started at

2:30 one afternoon, with everything cold, and within less than three hours they had

made a quarter of a ton of steel. The sand

used for making that steel was from bags

brought from Monterey bay, just below San Francisco. The sand was taken from the

bags, run over the concentrating tables to

get out the gold and other minerals, then

dried, and the magnetic from in it taken out and run into steel. At the same time the

gold in the sand was melted into a button, and all was done before 5 p.m. If electrical furnaces were established on Monterey bay they might now be furnishing the steel for

Dr. Day tells me that Uncle Sam's little

furnace could be run at a profit for smelt-ing certain kinds of steel, and that for five

thousand dollars two furnaces could be put

fining, which would make money right

up, one for smelting and the other for re-

Opportunities for Farmers and Miners.

These new discoveries as to the separation

and saving of the metals in the black sands

will result in the building up of a part of

Oregon which is now so wild that elk roam

the woods, and that one can buy a bear skin

there for fifty cents or a dollar. This is what

Dr. Day tells me he paid for skins in those

the rebuilding of San Francisco.

along, day in and day out.



tions dispatched into his land, and for weeks after his second victory his regiments ravaged the country far and wide. Finally, however, the immigrants routed his army and took and destroyed his capital. But Dingane was not yet beaten. With a stubboruness that was all but sublime he kept up the fight, and not until the Boers made common cause with Dingane's brother Panda, in rebellion against the king, was Dingane overwhelmed and obliged to flee to a neighboring tribe for refuge. Here he died miserably a little later. This was

Ketchwayo Wipes Out an Army.

justified the deed on the ground that the Boers would have killed him had he not killed them first.

Dingane followed up this act of treachery by attacking the main camp of the Boers, some miles distant from his capital, Un-kunginghlovu. At first the Zulu was suc-cessful, but the Boers railled and drove the

enemy off with a loss of at least 500 killed. Ten of the Zulu king's regiments took part in this attempted massacre.

Thereafter there was continual warfare between Dings is and the Boers. Dingane practically wired out two punitive expedi-

Panda was succeeded in 1872 by Ketchwayo, who waged disastrous war against

the British in 1879. Ketchwayo was a great warrior. His fighting career may be said to have begun in earnest sixteen years before he succeeded his father. Ketchwayo and his brother Umbulazi were rivals for the Zulu throne. This rivalry became so intense that there was no waiting to fight it out after the father's death, and after Ketchwago had driven his brother's army into the Tugela. where most of those who had escaped on land perished, the succession was decided in Ketchwayo's favor. Later on, however, another brother, Umtonga, showed signs of disputing Ketchwayo's rights. Umtonga fied, and thirty kraals of the tribe that

FAMOUS ZULU CHIEFS Chaka Had Conquered a Large Portion of Africa. FOUNDED THE BLACK NATION Death Offering to the Spirit of the

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ZULVIAND POLICEMEN

AND KETCHWAYO

First and Last Conflicts With the Trekking Boers and Invading

King's Mother.

English.

Written for The Star.

DINGANE

The major and by far the most interesting portion of the history of the Zulus, a number of whom have lately been in rebellion against the British, can be studied in the careers of Zululand's three most fanous chiefs paramount or kings. These are Chaka, Dingane and Ketchwayo.

Chaka came into power when his people were inferior in the art of war and practically tributary to another tribe. In a few years he had made them all-powerful and given shape to their history until this day. Dingane was the first Zulu to clash with advancing civilization in the persons of the Boers. Ketchwayo fought the British in 1879, his soldiers killed a prince of the house of Napoleon, and when he surrendered the liberty of Zululand passed away forever.

From the time Chaka began to mold the Zulu nation until it became a colony of Great Britain there is a span of less than three-quarters of a century. Yet in this time scores of wars were waged, countless cruelties perpetrated in the name of the kings, Zululand rose, declined and fell

the kings, Zululand rose, declined and fell as an independent power.

Chaka was the greatest king of the Zulus. He was the son of Sezagacone, who ruled before him. He was born about 1787. When he was fifteen years old his father and mother quarreled, and the latter, fearing for the life of herself and son, againstwhom the king made threats, fled to the Amatetwa tribe, whose chief, Udingiswayo, held the Zulus tributary. Chaka entered the Amatetwa army and by skill and the Amatetwa army and by skill and courage soon raised himself from a private soldier to an induna of considerable repu-tation. By the time of his father's death he had become a great favorite in his adopted country, his fame had reached Zululand, and so he was called by his own people to be their king. About the same time his protector died and Chaka also be-

came head of the Amatetwa tribe.

Then he began as bloody a career of war as ever was known in lower Africa. With the united Amatetwa and Zulu armies swept the country far and near. To after tribe came under his yoke. Whole gions were depopulated to a man; the birds and beasts of carrion were given more work in a day than they could do in a year. In 1822 he had pushed his authority half way across the African continent from the seacoast and from Umzimvubu, or St. Johns, on the southwest, to Inhambane on the northeast. Tens of thousands must have fallen before his assegal at one time or another, for it was his custom to show no mercy to a defeated army or the inhab-itants of villages run across during the

Course of a campaign.
But the bloodiest and cruelest of Chaka's acts was that which marked the death and burial of his mother. An un-willing and horrified witness was a white man of the name of Flynn, who had been rescued from shipwreck by Chaka and favored by the latter's friendship. Mr. Flynn has recorded what he heard and saw:

How Chaka Mourned.

"As soon as the death was announced the women and the men who were present tore from their persons every description

"Chaka now appeared before the hut in which the body lay. For about twenty minutes he stood in silent, mournful attitude. After two or three deep sighs he broke out into fanatic yells.

"This signal was sufficient. The chief and people to the number of about fifteen thousand commenced the most dismal and horrible lamentations. All through the night this continued, none daring to take a rest or to refresh themselves with water. "The morning dawned, and before noon

the number had increased to sixty thousand. The cries became indescribably horrible. Hundreds were lying faint from fatigue, while the carcasses of forty oxen lay in a heap. These had been slaughtered as an offering to the guardian spirits of the

tribe.
"At noon the whole force formed a circle, with Chaka in their center, and sang a war song. At the close Chaka ordered some men to be executed on the spot, and

departed queen and her ill-fated attend-A Man of His Word. Chaka further honored the memory of his

mother by sending out regiments of soldiers to slay all who had not been present at the general wailing. At the end of the year Chaka left the kraal where his mother had died and went with his whole nation and cattle, the latter numbering about 100,000, to Tuguza, on the Umboti river, Natal. Mr. Flynn, who had started out to pay Chaka a visit, met him on his march.
"He told me that another lamentation was to take place. I begged him to grant me one request. He smiled, and asked what it could possibly be. I entreated him not to allow, on this occasion, any of his people to be put to death. He at once called for Gomani (his principal chief), and laughing 'that I should plead for the life of dogs, gave orders to him to see that none were put to death."

Chaka kept strictly to his agreement and at this second and last lamenation the most interesting thing was the ceremony of purification. Each regiment presented itself before Chaka, and each individual, holding the gall bladder of a slaughtered calf in his hand, sprinkled the gall ove: After this Chaka set about to wage war against what few tribes in his part of Africa he had not already wiped out or

brought under his feet. Chaka gave Zululand its first standing army. He broke up clanship and took away power from the chiefs. He divided the women into classes, or regiments, action of their envoys to witness a review of the Zulu army, insulted and challenged them to combat. Either personally or through his indunas (subsidiary chiefs) he hurled Chaka gave Zululand its first standing the women into classes, or regiments, ac-cording to age, and a class had to marry into whatsoever fighting regiment he or-dered. Regiments were not allowed to marry unli they had put on "rings," that is, distinguished themselves on the field of battle a prescribed number of years. Hence marriage did not take place until about

the age of forty.

Though he had wives by the tens he always held that he had no offspring. Once, when a new born baby was presented to him as its father, he killed the infant with a blow and then murdered the mother. There is a Zulu tradition that all children born to him were killed by his order.

Got Rid of the Witch Doctors.

Another story that is told about him in gululand to that day has to do with the bloody trick he played on the witch doc

Unlike most Zulus, Chaka did not have much faith in them and their doings. Ac cordingly he laid a trap in order to discredit them. He and two conspirators one night sprinkled some bullock's blood over the huts of several kraals. He then assembled all the witch doctors of Zululand and ordered them to "smell out" the man or men who had done this thing. All the doctors except two accused innocent persons; these two boldly named the king as the perpetrator of the deed. Thereupon Chaks smilingly ordered all the doctors except the two sly ones to the execution block. Chaka was assassinated in 1929. The conspirators were two of his brothers, Dingane and Umblangana, and Satain, a principal domestic. An assegai was thrust into his back while he was seated. He rose as if to defend himself, then fell. The last words of this, the greatest of Zulu chieftains, were: "What have I done to you, children of my father?" Dingane suc-

Dingane proved no less cruel and crafty. He put a brother to death that he might have an excuse to destroy the people in the ten kraals that belonged to this brother and so confiscate the property, in accordance with Zulu custom.

He was also fond of his little joke, and

not averse to playing it on the mission-aries whom he permitted to go among his people. One has recorded this incident: "Dingane sent for us early this morning.

He asked me why I was in such a hurry to teach his people. I said that life was short. He asked how that could be, as, according to me, we were all to wake again. He sent forth his servants, who, with loud voices, called all the men of the town together. When they were all seated, to the number of 300, he told me that I might now preach the same words to them which I had spoken yesterday, and begged me to go forward and stand in the midst of them. Dingane was not attentive. He made sport with a blind man, whom he bade go and look for something. The poor fellow stumbled, ran against me, and fell over my auditory. I felt grieved."

War on the Boers. It was in Dingane's time that the Boers

trekked into Zulu country. A party of Boers, under the command of Gov. Retief, Boers, under the command of Gov. Retief, sought out Dingane to gain his consent to their taking over a part of the uninhabited country. As entertainment for the king, the Decre depends on the backs of their and the way carly to look down on the considerable and the production of a selective and remarks a singularity of the sew telegraph Lodge turned his attention to the production of a selective and remarks a singularity of the sew telegraph Lodge turned his taken that the production of a selective and remarks a singularity of the sew telegraph Lodge turned his taken that the production of a selective and remarks a singularity of the sew telegraph Lodge turned his taken that the production of a selective and remarks a singularity of the sew telegraph Lodge turned his taken that the production of a selective and the architecture of the production of a selective and the cries became more violent. As therefore, and the cries became more violent. The case illustrates a singularity of the sew the production of a selective and the cries became more violent. As the training of the coloring continue to the coloring continue to the production of a selective and the cries became more violent. The case illustrates a singularity of the sex and the cries became more violent. The case illustrates a singularity of the sex and the cries became more violent. The case illustrates a singularity of the sex and the cries became more violent. The case illustrates a singularity of the sex and the cries became more violent. The case illustrates a singularity of the sex and the cries became more violent. The case illustrates a singularity of the sex and the cries became more violent. The case illustrates a singularity of the sex and the cries became more violent. The case illustrates a singularity of the sex and the cries became more violent. The case illustrates a singularity of the sex and the cries became more violent. The case illustrates a singularity of the sex and the cries became more violent. The case illustrates a singularity of the sex and the cries became more violent. The case illustrates a singularity of the sex and the crie horses and shot off their guns. Dingane longed inordinately to possess the guns and sent a messenger to Retief demanding them. This was refused, and naturally so. The next day the crafty Dingane invited all the Boers to the number of about a 100 into the cartle fold to take leave of him. But before entering upon the ceremonies of leave-taking he ordered the people to dance. This they did, forming, as usual, into a haif moon. Nearer and nearer they swung toward the Boers; at last they were within arm's reach, when Dingane ordered the white men selzed. This was speedliy done, eight or ten Zulus laying hold of every man. The prisoners were then

sheltered him were utterly destroyed, men, romen and children being massacred at Ketchwayo's command Ketchwayo succeeded his father in 1872. He applied to the English government to recognize him as king of the Zulus, and a

Mr. Theophilus Shepstone, as the queen's representative, crowned him. Ketchwayo promised the Englishman to hold the lives of his subjects in high regard.

But, agreement or no agreement, Ketchwayo could not long keep from bloody

covered it weak, because a goodly number of soldiers had pleaded sickness, he dis-patched a trusted regiment to the kraals with orders to kill all absentees.

When, after mobilizing his army, he dis-

try, so I will save the doctors the trouble of attending on you," he said. Thousands of men thus met death.

Defiance of the British.

He ordered a certain regiment, or class, of women to marry the men of one of his regiments. The women demurred, saying there were too few men. The king told off another regiment. Still the women balked. Then Ketchwayo had a regiment kill most

of them. A true Zulu, Ketchwayo had no fear of war with any tribe or nation, black or white, and so when he began to see signs of trouble with the British, he forced some defiance at the British every chance he got and heaped up insults on civil and military authority. He forced the missionaries and traders out of his realms, and stubbornly refused all the demands of the British.

He was certain that his warriors would be able to wipe out the British columns with expedition. Had he not spent three years in preparation, and were not his people supreme over all the blacks round about? Therefore his was a rude awakening when his forces were about about? ing when his forces were shattered and Ulundi proved his Waterloo.

From that day until the rising of the chief Bambatta, Zululand has been comparatively quiet. Now that Bambatta has paratively quiet. Now that Bambaria has been found dead on the field of battle, there seems good reason to believe that the research forces will soon be quelled. The bellious forces will soon be quelled. The generalship displayed by Bambatta was of to mean order, and for the sake of Zuluand it is a good thing that the present is not as the time of Chaka and Dingane and Ketchwayo. Under such favorable condi-tions Eambatta would probably have become a terror in Zululand and all the surrounding territory.

Slang in the Schools. From the Philadelphia Ledger.

The board of education's committee on lementary schools has ordered teachers to expurgate slang from their vocabulary. It is not to be inferred from this action that the use of slang is general with Philadelphia teachers, but there are doubtless some unconscious offenders against the vernacular among them.

Many expressions that once were slang have become firmly imbedded in the language. There is a mysterious process of survival which in time transforms a slang word or phrase into accepted English. Much of the current slang of the street is 'ulgar and meaningless. It has been ob-served that a great deal of the slang-maker's skill is spent on ideas which make the sang dictionary at its best an unpre-sentable book. "while short of this limit there is an ugly air about lists of words so largely coined by vagabonds."

There are many slang expressions which from their nativity and association, as well as their inherent vulgarity, may properly be termed the criminals of the larguage. Careless persons who use these expressions have no idea of their genesis and original meaning. They have become popular phrases, which have taken on the garb of respectability. The language is sufficiently affluent for lively conversation without drawing upon the rogue's lexicon to en-

lven it. Some slang is not disreputable, but in the Interest of pure speech the slang habit should be vigilantly avoided. Brander Matthews, in an essay on the functions slang, remarks:

"I am not advocating the indiscriminate employmen of the cheap phrases of the day, the meaningless catchwords which succeed each other in the popular vocabulary. On the contrary. I am glad to have a chance to say that 'a gentleman and a scholar' is never regardless and never reckless in his-use of language."

WIRELESS IS TEN YEARS OLD. Great Strides Made in a Single Decade of Experiment. From the Scientific American.

Wireless telegraphy is now ten years old. On June 2, 1896, there was filed in the British patent office a provisional specification "for improvements in transmitting electrical impulses and signals and in apparaatus therefor," by one Guglielmo Marconi, residing at 71 Hereford road, Bayswater, England.

At the time this patent was applied for the art of transmitting messages without wires was wholly unknown, in so far as its practice and utilization were concerned.

Marconi was perhaps the most persistent experimenter in the bridging of greater dis-

conferred a lasting benefit upon science and lquid barretter, an instrument that in its sensibility, its ruggedness and its simplicity is second only to the telephone receiver of

in some localities will make a great deal

from this metal in addition to the gold

thich is almost always found in connecon with it. Platinum is a silvery white

etal as hard as iron and very malleable.

vorkable that wires have been made of it

which are one-twelve-hundredths of an inch

This metal is of great value in the arts.

it will not amalgamate with quicksilver and it is about the only metal which can

e used in carrying the electric current

through the glass of the incandescent

lamp. Every electric globe or bulb has two fine platinum wires running through the glass by which the electricity goes to the filament within. It is used in all kinds

of electrical machinery. It is also used in dentistry and especially for the pins

which attach a brand new porcelain tooth to an old snag of a root.

Platinum is used in laboratories for crucibles and other utensils, as it is not attacked by acids, and it is also alloyed with many other metals for various purposes. It has at times hear used in the

poses. It has at times been used in Russia for the coinage of high values of money, and, indeed, it is almost always worth more than its weight in gold. It is

now bringing upward of \$20 per ounce.

A Treasure in Pop Bottles.

Dr. Day tells me that there is a regular

search going on along the coast of Ore-

gon for a hidden treasure of platinum,

somewhat the same as the hunt for Capt

above remark as to his work in the black | Kidd's pirate hoard off the coast of the

sands, although he did not. I called upon Atlantic. As the story goes, this treasure him at the survey the other day and had a is contained in six pop or ginger beer hourles,

nature, and still it is so ductile and

With these improvements, chiefly made within the past five years, wireless telegra-phy is all that the most exacting critic could hope for, if we except selectivity, and in this especial branch of the work there is et unlimited opportunity for the wireless nventor to exercise his ingenuity.

Singular Austrian Law.

From the Manchester Guardian. A few days ago the murderer of Mr. Reid the Paisley man who mysteriously disappeared from Heidelberg last July, having een arrested in Austria, was tried at Feldkirch and was convicted and sentenced to

shown that we shall supply a large part metals which resist the action of mercury of our own platinum, and that our miners and has been thrown away as waste. Saved 73 Cents; Lost \$59. of copper which he told me were grains

of almost pure gold. Said he:

STEEL INGOT CAST IN UNCLE SAMS, ELECTRIC FURNACE FROM BLACK SAMD

Dr. Day showed me a little bottle con taining what looked like grains and scraps

"The man who owned the mine from which this gold was taken was saving. 78 cents for every ton of dirt washed, while he was throwing away \$59 worth of gold as refuse coppor. When specimens of the waste were sent to me I thought they were copper. I tested them with nitric acid with no result. I then treated them with hydrochloric acid, and they began to look a little more like gold, and when I showed them to my assistant he said at once that they were gold and he took them and melted them down into a gold button, which

was worth \$2 0an ounce. "There is a great deal of gold in the black sand that has never been gotten out," continued Dr. Day, "and there is much black sand, containing quantities of gold, which has not been worked because the proportion of sand was so great that it was hard to handle and the miners pre-ferred to go to other places where the sand was less in quantity, even though it contained less gold. By running the black mend over the Wilfley, Pinder and other tables we find that we can save from 95 to 98 per cent of the gold and platinum, and same time separate the other metals

so that they can be reduced.' An Iron Nugget as Big as Lake Su-

perior. "The gold and platinum are by no means | be established. the only values in the black sand," con-

THE CITY'S MUSIC. Two Later Strains in It That Are Peculiarly Modern and Stirring.

From the New York Sun. Peculiarly modern among the city's ounds are the resonant rattle of the pneumatic riveters and the incessant purring of the pneumatic stone carving tool, the first coming down to us from the lofty skeleton of some steel frame building under construction and the latter from the stone front of a building upon which men are doing the finishing carving.

Both sounds make music so full of energy and hustle that it may cause men to move faster when they hear it. Let these tools be in use where they can be seen nearby and men will halt at the sound of

Broadway, while groups of men stood at the open ends of the curtains hung behind the carvers and watched. Hard stone, granite; but the pneumatic tools, making a hundred strokes where a man with a mallet and chisel could have made one, bit into it all the same. As the lookerson stood and watched with interest the manner of headling the strong and stood and watched with interest the manner of headling the strong and strong ner of handling the tools and listened to their incessant purring they could see the carving grow.

Racial Differences in India. From the Calcutta Country and People.

Europeans, whether black or white, are distinctly imperious. Both the rulers and the ruled are governed by the law of mutual concession and the spirit of give and take. There is consequently no legitimate ground for one party to look down on the

regions. Much of the land is good for farming, but now inaccessible by railroad. Some of it lies along the beach and some on the rivers where there is black sand. In the future the farmers may own their own con-centration tables, which they can use for the separation of the metals. They can pile up their iron ore, and in time it will be taken out by the railroads. For a thousand dollars a mining proposition of this kind can FRANK G. CARPENTER. of ornament.

The attitude and behavior of the so-called